

## Review Form 1.7

Journal Name:	Asian Journal of Advanced Research and Reports
Manuscript Number:	Ms_AJARR_107527
Title of the Manuscript:	RADIOLOGICAL ASSESSMENT OF BACKGROUND IONIZING RADIATION EXPOSURE RATES FROM SOLID MINERAL MINING SITES IN IKWO LOCAL GOVERNMENT AREA OF EBONYI STATE, NIGERIA.
Type of the Article	Original Research Article

### PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Compulsory</b> REVISION comments</p> <p><b>1. Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript) It's important to the local scientific community.</p> <p><b>2. Is the title of the article suitable?</b> (If not please suggest an alternative title) It's appropriate and objective.</p> <p><b>3. Is the abstract of the article comprehensive?</b> Yes. They's structured according to the development of the work.</p> <p><b>4. Are subsections and structure of the manuscript appropriate?</b> Yes. It's pertinent, suitable and from the important public health point of view.</p> <p><b>5. Do you think the manuscript is scientifically correct?</b> Yes. The terms are according to what usually literature reporters.</p> <p><b>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b> Yes. References are enough for the update and understanding of content.</p> <p><b>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</b></p>	<p>A study to assess the radiological background ionizing radiation exposure dose rates from solid mineral mining sites in Ikwo Local Government Area of Ebonyi State was carried out outdoor Background Ionizing Radiation (BIR) levels in Emene Industrial Layout of Enugu State, Nigeria has been conducted. An in-situ measurement of BIR exposure rate in mRh-1 for 30 locations was done using a well calibrated Digilert-200 nuclear radiation meter (S.E international, INC.) at an elevation of 1.0 m above ground level with a geographical positioning system (GPS) for geographical location. From the results obtained the BIR exposure rate of 0.02mR/h for the mining sites exceeded the recommended permissible limit of 0.013 mR/hr. The mean absorbed dose rate of 185.39nGy/h is greater than the recommended permissible limit of 84nGy/h. The results indicate contamination and radiologically enhanced environment by radiation. This may be due to continuous excavation of land and mining of Lead/Zinc solid mineral which enhances the environment radioactivity of the area. The excess lifetime cancer risk calculated revealed that the chance of contracting cancer for residents of the study area is high and the effective doses to the adult organs calculated are less than the permissive limit and insignificant in all the organs except the testes and bone marrow. However, to keep the radiation level under control, authorized government organizations and radiation protection bodies must conduct regular check and periodic monitoring in the area.</p>	
<p><b>Minor</b> REVISION comments</p> <p><b>1. Is language/English quality of the article suitable for scholarly communications?</b> Yes. The quality of English in enough for a good understanding.</p>		
<p><b>Optional/General</b> comments</p>		

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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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